

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

Claims 1-10 (Cancelled).

11. (Currently amended) A telecommunications network, comprising:

plural interconnected nodes forming nodes of a telecommunications network; and

at least one protecting node ~~in~~of the interconnected nodes comprising a router table, the router table having an entry identifying an alternative route around an adjacent node to the protecting node in case of failure of the adjacent node, where the adjacent node is a separate one of the plural interconnected nodes from the protecting node.

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12. (Previously presented) The telecommunications network of claim 11, in which the router table has an entry identifying a port associated with the alternative route.

13. (Previously presented) The telecommunications network of claim 11, in which the alternative route includes a cycle of nodes directly connected to the adjacent node and there is associated with each node in the cycle of nodes a routing table with an entry identifying the cycle of nodes.

14. (Previously presented) A protecting node, comprising a router table, the router table having an entry identifying a cycle of nodes directly connected to an adjacent node to the protecting node, the cycle of nodes not including the adjacent node.

15. (Previously presented) The protecting node of claim 14, in which the router table has an entry identifying a port associated with the cycle of nodes.

16. (Previously presented) The protecting node of claim 14, in which the protecting node has a router table in which is stored, for each adjacent node to the protecting node, an entry identifying a cycle of nodes directly connected to the adjacent node to the protecting node, each cycle of nodes not including the respective adjacent node.

17. (Currently/amended) A data packet for a network of nodes, where the nodes form separate nodes of a telecommunications network, the data packet comprising:

an ID field that specifies a cycle of nodes selected from the separate nodes of a telecommunications network in which the nodes in the cycle are all adjacent a node not in the cycle and a data field, and the node not in the cycle is a separate node of the telecommunications network from the nodes in the cycle.

18. (Previously presented) The data packet of claim 17, further comprising a path cost field.

19. (Previously presented) The data packet of claim 17, further comprising a field identifying a node that created the data packet.

20. (Currently/amended) A method of protecting against node failure in a network, in which the network includes plural interconnected nodes of a telecommunications network, the method comprising the step of:

storing at a protecting node an entry identifying a cycle of nodes that form at least one alternative route around an adjacent node to the ~~protected~~protecting node, in which the cycle of nodes includes all nodes directly connected to the adjacent node and not the adjacent node, where the adjacent node is a separate one of the plural interconnected nodes from the protecting node.

21. (Previously presented) The method of claim 20, further comprising the step of:

upon failure of the adjacent node, routing all data packets whose preferred path includes the adjacent node, around the alternative route beginning at the protected node.

22. (Previously presented) The method of claim 21, in which the preferred path is the least cost path.

23. (Previously presented) The method of claim 20, in which each data packet routed around the alternative route contain an ID field that identifies the cycle of nodes, a path cost field containing the cost of the least cost path and a data field.

24. (Previously presented) The method of claim 20, in which each node in the alternative route has a router table having an entry that identifies the cycle of nodes and continues to route the data packet around the alternative route until the path cost from a node in the alternative route to the destination of the data packet is less than the cost of the least cost path.

25. (Previously presented) The method of claim 22, further comprising the step of:

at each node in the cycle of nodes, assessing whether to continue on the cycle of nodes or leave the cycle of nodes at that node.

26. (Previously presented) The method of claim 25, in which the assessment is made by assessing the cost of the route leaving the cycle at that node.

27. (Previously presented) The method of claim 26, in which the assessment is made by comparing the cost of the route leaving the cycle at that node with the cost of the route had the node not failed.

28. (Previously presented) The method of claim 20, further comprising the step of:

removing data packets from the cycle of nodes when data packets have returned to the entry point of the data packet onto the cycle.

29. (Currently ~~amended~~) A telecommunications network comprising:

plural interconnected nodes forming separate nodes of a network; and

each node comprising a router table, the router table having an entry identifying an alternative route around an adjacent node to the node in case of failure of the adjacent node, where the adjacent node is a separate one of the plural interconnected nodes from the protecting node.

30. (Currently ~~amended~~) A telecommunications network, comprising:

plural interconnected nodes forming separate nodes of a network; and

each node of the plural interconnected nodes being directly connected to a corresponding set of protecting nodes, each node in ~~the~~each set of protecting nodes being separate ones of the plural interconnected nodes and each node in each set of protecting nodes comprising a router table, ~~the~~each router table having an entry identifying an alternative route around the node to which the corresponding set of protecting nodes is directly connected in case of failure of the node.
